2825

O I P E Please type a plus sign (+) inside this box → +

Based on PTO/SB/21 (05-03)
Approved for use through 04/30/2003. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond
to a collection of information unless it displays a valid OMB control number.

003	<u> </u>									o persons are required to respond plays a valid OMB control number.
B	<del>,</del>	*					Application Numb r			10/046,926
	TRANSN		ra	L			Filing Date			1/13/02
	FOR	RM					First Named Inventor			Steven Teig
	(to be used for all correspon	ndence	e afte	r init	ial fili	ng)	Group Art Unit			2925
							Examiner Name			
$\sum_{i}$	otal Number of Pages in Th	is Sub	miss	ion			Attorney Docket Number		_	SPLX.P0085
					End	losu	es (Check all that app	ly)	en.	
	Fee Transmittal Form						nent Papers application)		After Al Group	llowance Communication to
	Fee Attached			⊏	] [	rawing	(s)			Communication to Board of sand Interferences
	Amendment/Reply				] L	icensin	g-related Papers			Communication to Group Notice, Brief, Reply Brief)
	After Final				] p	etition			Proprie	tary Information
	Affidavits/declara	tions(:	s)	Petition t			to Convert to a Provisional ion		Status	Letter
	Extension of Time Rec	quest			Power of Attorney, Revocation Change of Correspondence Address				Enclosures ( <i>Listed below</i> ):	
	Express Abandonment Request	t		Г	<b>]</b> T	ermina	l Disclaimer		Form 1 88 cite	
×	Information Disclosure Statement	•		┎	] F	lequest	for Refund			
	Certified Copy of Priori Documents	ity			] c	D, Nur	nber of CD(s)			
	Response to Missing F Incomplete Application			R	ema	ırks:				
	Response to Miss Parts under 37 Cl or 1.53		52			$\boldsymbol{\Lambda}$				
		SI	GŅ.	ĄŢŲ	JRE	OF A	PPLICANT, ATTORNEY,	OR A	GENT	
	n <i>Or</i> vidual name	Ma	nj A	del	į,∖R	eg. N	o. 39,585 of Stattler Joh	anse	n & Ad	eli LLP
Sig	nature	Ý	/ L			W				
Dat	e	Nov	/em	ber	13,	2003	and a common of the second			1.1.2.2.2.2 × 3.4.1.0.748.meg communication states and states are states as the state of the states are states as the states are states are states as the states are states are states are states as the states are s
		CE	RT	IFI	CA	TE (	OF TRANSMISSION	1/MA	ILING	
Pos	reby certify that this corr tal Services as first clas 13-1450, on this date: 1	s mai	lih a	nce i	s be nvel	ing fac	simile transmitted to the USP dressed to: Commissioner for	TO or Paten	deposite ts, P.O. I	d with the United States Box 1450, Alexandria, VA
				+-		<del>- 1 ://</del>				
	ed or printed name	Mar	ni A	deli						

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commission r for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

OTP E 17 2003 NOV 1 7 2003

## CERTIFICATE OF MAILING BY "FIRST CLASS MAIL"

bereby country that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 20313-1450, on November 13, 2003.

Mani Adeli

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of:

Steven Teig

Serial No.:

10/046,926

Filing Date:

1/13/02

For:

**ROUTING METHOD AND** 

**APPARATUS** 

## INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. § 1.97 and § 1.98, applicants submit with this Information Disclosure Statement the attached Form PTO-1449, and copies of the documents listed in the 1449 form for consideration by the Examiner. The Examiner is requested to make these documents of record. Applicants would appreciate the Examiner initialing and returning the Form PTO-1449, indicating that the information has been considered and made of record herein.

This Information Disclosure Statement under 37 C.F.R. § 1.97 is not to be construed as a representation that: (i) a complete search has been made; (ii) additional information material to

the examination of this application does not exist; (iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the above information constitutes prior art to the subject invention.

This Information Disclosure Statement is submitted within three months of the application filing date or before the mailing date of a first Office Action on the merits; accordingly, no fee or separate requirements are required.

However, in the unlikely event that the Patent Office determines that additional fees, extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 50-1128** referencing SPLX.P0085. However, the Assistant Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Dated: November 13, 2003

Respectfully submitted

By: \_

Mani Adeli Registration No. 39,585

Stattler, Johansen & Adeli LLP P.O. Box 51860 Palo Alto, CA 94303-0728

Phone No. (650) 752-0990 x102 Fax No. (650) 752-0995

2

Serial No. 10/046,926 Docket No. SPLX.P0085 Please type a plus ign (+) inside this box → +

Based on PTO/SB/08 a & b (05-03)
Approved for use through 05/31/2003. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

λ.	냄				
, \$	Substitute for form 1		то	Application Number	10/046,926
MAD SHEET OF	>=====================================			Filing Date	1/13/02
	RMATION DI TEMENT BY			First Named Inventor	Steven Teig
SIA	I E IVIE I 4 I DI	<i>-</i>	TICAI4	Group Art Unit	2825
(L	use as many sheets a	as nece:	ssary)	Examiner Name	
Sheet	1	of	7	Attorney Docket Number	SPLX.P0085

				U.S.	PATENT DOCUMENTS	
Examiner* Initials	Cite No.1		ument I Code² known)	Date of Publication MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1.	2001/0009 031	A1	07-19-2001	Nitta et al.	
	2.	2002/0182 844	A1	12-05-2002	Igarashi et al.	
	3.	2003/0005 399	A1	01-02-2003	lgarashi et al.	
	4.	4,593,363		06-03-1986	Burstein et al.	
	5.	5,267,176		11-30-1993	Antreich et al.	
	6.	5,566,078		10-15-1996	Ding et al.	
	7.	5,587,923		12-24-1996	Wang	
	8.	5,618,744		04-08-1997	Suzuki et al.	
	9.	5,635,736		06-03-1997	Funaki et al.	
	10.	5,637,920		06-10-1997	Loo	
	11.	5,640,327		06-17-1997	Ting	
	12.	5,663,891		09-02-1997	Bamji et al.	
	13.	5,757,089		05-26-1998	Ishizuka	
	14.	5,784,289		07-21-1998	Wang	
	15.	5,798,936		08-25-1998	Cheng	
	16.	5,838,583		11-17-1998	Varadarajan et al.	
	17.	5,889,677		03-30-1999	Yasuda et al.	
	18.	5,980,093		11-09-1999	Jones et al.	
	19.	6,070,108		05-30-2000	Andreev et al.	
	20.	6,128,767		10-03-2000	Chapman	

Examiner	 Date	
Signature	Considered	

<sup>\*</sup> EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number(optional). ² See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁵ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Based on PTO/SB/08 a & b (05-03) Approved for use through 05/31/2003. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE plus sign (+) inside this box → Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number **Application Number** 10/046,926 Substitute for form 1449A/PTO **Filing Date** 1/13/02 ANFORMATION DISCLOSURE & RAD ON First Named Inventor Steven Teig STATEMENT BY APPLICANT Group Art Unit 2825 (use as many sheets as necessary) **Examiner Name** 7 Attorney Docket Number SPLX.P0085 2 of Sheet

			U.S.	PATENT DOCUMENTS	
21.	6,150,193		11-21-2000	Glenn	
22.	6,209,123	B1	03-27-2001	Maziasz et al.	·
23.	6,219,832	B1	04-17-2001	Buzbee	
24.	6,226,560	B1	05-01-2001	Hama et al.	
25.	6,249,902	B1	06-19-2001	Igusa et al.	
26.	6,253,363	B1	06-26-2001	Gasanov et al.	
27.	6,295,634	B1	09-25-2001	Matsumoto	
28.	6,307,256	_	10-23-2001	Chiang et al.	
29.	6,316,838	B1	11-13-2001	Ozawa et al.	
30.	6,324,674	B2	11-27-2001	Andreev et al.	
31.	6,324,675	B1	11-27-2001	Dutta et al.	
32.	6,327,693	B1	12-04-2001	Cheng et al.	
33.	6,330,707	B1	12-11-2001	Shinomiya et al.	
34.	6,407,434	В1	06-18-2002	Rostoker et al.	
35.	6,415,422	B1	07-02-2002	Mehrotra et al.	
36.	6,442,743	B1	08-27-2002	Sarrafzadeh et al.	
37.	6,448,591	B1	09-10-2002	Juengling	
38.	6,473,891	B1	10-29-2002	Shively	
39.	6,480,991	B1	11-12-2002	Cho et al.	
40.	6,490,713	B2	12-03-2002	Matsumoto	
41.	6,519,751	B2	02-11-2003	Sriram et al.	
42.	6,543,043	B1	04-01-2003	Wang et al.	
43.	6,546,540	B1	04-08-2003	Igarashi et al.	

Examiner	Date
Signature	Considered

<sup>\*</sup> EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number(optional). See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Skind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

a plus sign (+) inside this box 🗕 Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

y 1 7 2003 📆	Substitute for form 1	1449A/F	то	Application Number	10/046,926	
H	INFORMATION DISCLOSURE  STATEMENT BY APPLICANT  (use as many sheets as necessary)	Filing Date	1/13/02			
O¢ini Γατέγ <b>να</b> ανα	RMATION DI	SCL. Appi	ICANT	First Named Inventor	Steven Teig	
ATTEN O I Y I	CINEIVI DI	AI I I		Group Art Unit	2825	
(us	se as many sheets a	as nece	ssary)	Examiner Name		
Sheet	3	of	. 7	Attorney Docket Number	SPLX.P0085	

U.S. PATENT DOCUMENTS										
44.	6,557,145	B2	04-29-2003	Boyle et al.						
45.	6,567,967	B2	05-20-2003	Greidinger et al.						

i				I	FOREIGN PATENT DOCUMENT	S		
Examiner* Initials	Cite No.1	Fo Office <sup>5</sup>		Kind Cod Name of Patentee or Publicat		Date of Publication MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
	46.	JP	411296560	Α	Matsumoto et al.	10-29-1999	with English translation of Abstract;	
	47.	JP	2000-82743	A	lgarashi et al.	03-21-2000	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	1
	48.	JР	H03-173471	А	Tawada et al.	07-26-1991	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	<b>V</b>
	49.	JP	H05-243379	A	Masako Kubota	09-21-1993	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	<b>V</b>
	50.	JP	H05-102305	А	Akihiro Sato	04-23-1993	with Japanese Patent Office's English translation of Abstract; and with English translation of the	<b>V</b>

Examiner	Date	
Signature	Considered	

<sup>\*</sup> EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \(^1\) Applicant's unique citation designation number(optional). \(^2\) See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. \(^3\) Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). \(^4\) For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. \(^5\) Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. \(^6\) Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, Ú.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Please type a plus sign (+) inside this box → +

Approved for use through 05/31/2003. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

· ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `		•		IIIIO	mation unless it contains a valid ONB control number
	Substitute for form 1	1449A/F	то	Application Number	10/046,926
197 1 7 2003 '	N; ₩./			Filing Date	1/13/02
A*	ORMATION DI			First Named Inv ntor	Steven Teig
BADEN	CILIVILIAI DI	~! · .		Group Art Unit	2825
(	(use as many sheets a	as nece	ssary)	Examiner Name	
Sheet	4	of	7	Attorney Docket Number	SPLX.P0085

		-		FOREIGN PATENT DOCUMENTS	3		
 						application.	
51.	JP	H07-86407	А	Shinpei Miura	03-31-1995	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	1
52.	JP	H09-162279	А	Masaaki Yoshida	06-20-1997	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	1

Examiner	Date
Signature	Considered

<sup>\*</sup> EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number(optional). ² See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

/	Please type a plus	s sign (+) inside this box	→ [+	Under the	U.S. Patent and Trace Paperwork Reduction Act of 1995	demark Office; U.S. DEPARTMENT OF COMMERCE 5, no persons are required to respond to a collection of rmation unless it contains a valid OMB control number
		Substitute for form	1449A/F	то	Application Number	10/046,926
ъ.	M8A J 1 STATES	y)			Filing Date	1/13/02
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		USURE ICANT	First Named Inventor	Steven Teig		
~	ZRAD - CF	ILIVILIAI DI	A	LIOAIII	Group Art Unit	2825
	(	use as many sheets a	as nece	ssary)	Examiner Name	
	Sheet	5	of	7	Attorney Docket Number	SPLX.P0085

		FOREIGN PATENT DOCUMENTS	
		NON PATENT LITERATURE DOCUMENTS	
Examiner* Initials	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>
	53.	Ahuja, R. et al., Faster Algorithms for the Shortest Path Problem, Journal of the Association for Computing Machinery, vol. 37, No. 2, April 1990, pp. 213-223.	
	5 <b>4</b> .	Brady, L. et al., Channel Routing on a 60° Grid, extended abstract, pp. 956-931.	
	55.	Brambilla, A. et al., Statistical Method for the Analysis of Interconnects Delay in Submicrometer Layouts, IEEE, 8/2001, pp. 957-966.	
	56.	Carothers, K., A Method of Measuring Nets Routability for MCM's General Area Routing Problems, 1999, pp. 186-192.	
	<b>57.</b>	Chen, H. et al., Physical Planning of On-Chip Interconnect Architectures, 2002, IEEE, International Conference, pp. 30-35.	
	58.	Cheng, K., Steiner Problem in Octilinear Routing Model, a Thesis Submitted for the Degree of Master of Science, National University Singapore, 1995, pp. 1-122.	
	59.	Chip Model with Wiring Cost Map, August 1983, IBM Technical Disclosure Bulletin, vol. 26, iss. 3A, pp. 929-933.	
	60.	Cong, J. et al., Efficient Heuristics for the Minimum Shortest Path Steiner Arborescence Problem with Applications to VLSI Physical Design, Cadence Design Systems and UCLA Computer Science Department, pp.88-95.	
	61.	Cong, J. et al., Performance-Driven Multi-Layer General Routing for PCB/MCM Designs, UCLA Computer Science Department, 1998, pp. 356-361.	
	62.	Enbody, R. et al., Near-Optimal <i>n</i> -Layer Channel Routing, 23 <sup>rd</sup> Design Automation Conference, 1986, pp. 708-714.	
	63.	Fang, S. et al., Constrained Via Minimization with Practical Considerations for Multi-Layer VLSI/PCB Routing Problems, 28 <sup>th</sup> ACM/IEEE Design Automation Conference, 1991, pp. 60-65.	
	64.	Hom, I. et al., Estimation of the Number of Routing Layers and Total Wirelength in a PCB Through Wiring Distribution Analysis, 1996, pp. 1-6.	
	65.	Hong, X. et al., Performance-Driven Steiner Tree Algorithms for Global Routing, 30 <sup>th</sup> ACM/IEEE Design Automation Conference, 1993, pp. 177-181.	

	- ·		 
Examiner	Da	ate	
Signature	Co	onsidered	

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

<sup>\*</sup> EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number(optional). ² See Kinds Codes of USPTO Patent Documents at <a href="www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁵ Applicant is to place a check mark here if English language Translation is attached.

Based on PTO/SB/08 a & b (05-03) Approved for use through 05/31/2003. OMB 0651-0031

Please type a plus sign (+) inside this box U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number **Application Number** 10/046,926 Substitute for form 1449A/PTO 7 2003 Filing Date 1/13/02 AFORMATION DISCLOSURE **First Named Inventor** Steven Teig TATEMENT BY APPLICANT & TRADOST Group Art Unit 2825 (use as many sheets as necessary) Examiner Name 7 Attorney Docket Number SPLX.P0085 Sheet 6 of

	FOREIGN PATENT DOCUMENTS
66	Hu, J. et al., A Timing-Constrained Algorithm for Simultaneous Global Routing of Multiple Nets, IEEE/ACM International Conference on Computer Aided Design. ICCAD – 2000. IEEE/ACM Digest of Technical Papers (CAT. NO.00CH37140), Proceedings of International Conference on Computer Aided Design (ICCAD), San Jose, CA, USA, 5-9 Nov. 2000, pp.99-103.
67.	Kastner, R. et al, Predictable Routing, IEEE/ACM International Conference on Computer Aided Design. ICCAD – 2000. IEEE/ACM Digest of Technical Papers (CAT. NO.00CH37140), Proceedings of International Conference on Computer Aided Design (ICCAD), San Jose, CA, USA, 5-9 Nov. 2000. pp. 110-113.
68.	Khoo, K. et al., An Efficient Multilayer MCM Router Based on Four-Via Routing, 30 <sup>th</sup> ACM/IEEE Design Automation Conference, 1993, pp. 590-595.
69.	Lillis, J. et al., Table-Lookup Methods for Improved Performance-Driven Routing, 1998, pp. 368-373.
70.	Lipski, W. et al., A Unified Approach to Layout Wirability, Mathimatical Systems Theory, 1987, pp. 189-203.
71.	Lodi, E. et al., A Preliminary Study of a Diagonal Channel-Routing Model, Algorithmica, 1989, pp.585-597.
72.	Lodi, E. et al., Lecture Notes in Computer Science, A 4d Channel Router for a Two Layer Diagonal Model, pp. 464-476, July 1988.
73.	Naclerio, N. et al., Via Minimization for Gridless Layouts, 24 <sup>th</sup> ACM/IEEE Design Automation Conference, 1987, pp. 159-165.
74.	Nam, G. et al, Satisfiability-Based Layout Revisited: Detailed Routing of Complex FPGAs Via Search-Based Boolean SAT, 1999, pp. 167-175
75.	Oh, J. et al., Constructing Lower and Upper Bounded Delay Routing Trees Using Linear Programming, 33 <sup>rd</sup> Design Automation Conference, 1996.
76.	Partitioning Logic on to Graph Structure, IBM Technical Disclosure Bulletin, February 1990, vol. 32, iss. 9A, pp. 469-475.
77.	Phillips, N., Channel Routing by Constraint Logic, Department of Computer Science Southern Illinois University, ACM, 1992.
78.	Takashima, Y. et al, Routability of FPGAs with Extremal Switch-Block Structures, IEICE Trans. Fundamentals, vol. E81-A, No. 5, May 1998, pp. 850-856.

Examiner	Date	
Signature	 Considered	

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

<sup>\*</sup> EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number(optional). See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Based on PTO/SB/08 a & b (05-03)

Approved for use through 05/31/2003. OMB 0651-0031 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of

information unless it contains a valid OMB control number Applicati n Number 10/046,926 bstitute for form 1449A/PTO Nev 1 7 2003 Filing Date 1/13/02 MATION DISCLOSURE **First Named Inventor** Steven Teig TEMENT BY APPLICANT RADERE Group Art Unit 2825 (use as many sheets as necessary) **Examiner Name** 7 Attorney Docket Number SPLX.P0085 Sheet 7 of

Please type a plus sign (+) inside this box

	FOREIGN PATENT DOCUMENTS
79.	Thakur, S. et al., Algorithms for a Switch Module Routing Problem, 1994, pp. 265-270.
80.	Theune, D. et al., HERO: Hierarchical EMC-constrained routing, 11/1992, IEEE pp 468-472
81.	Tseng, H., Timing and Crosstalk Driven Area Routing, pp. 378-381.
82.	Wang, D., Novel Routing Schemes for IC Layout, Part I: Two-Layer Channel Routing, 28 <sup>th</sup> ACM/IEEE Automation Conference, 1991, pp. 49-53.
83.	Wang, M. et al., Modeling and Minimization of Routing Congestion, Jan. 2000, IEEE proceedings of ASP-DAC, Asia and South Pacific, pp. 185-190.
84.	Wood, G. et al., FPGA Routing and Routability Estimation Via Boolean Satisfiability, Department of Electrical and Computer Engineering Carnegie Mellon University, Pittsburgh, PA, pp. 119-125.
85.	Zhang, C.X. et al., Floorplan Design Using a Hierarchical Neutral Learning Algorithm, IEEE, 6/1991. pp. 2060-2063.
86.	Zhou, H. et al., An Optimal Algorithm for River Routing with Crosstalk Constraints, 1996.
87.	Zhou, H. et al., Global Routing with Crosstalk Constraints, Department of Computer Sciences, University of Texas, 1998, pp. 374-377.
88.	Zhou, H. et al., Optimal River Routing with Crosstalk Constraints, ACM Transactions on Design Automation of Electronic Systems, vol. 3, No. 3, July 1998, pp. 496-514.

Examiner	Date
Signature	Considered

<sup>\*</sup> EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number(optional). ² See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. SKind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, Ú.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.